PRIOR ART

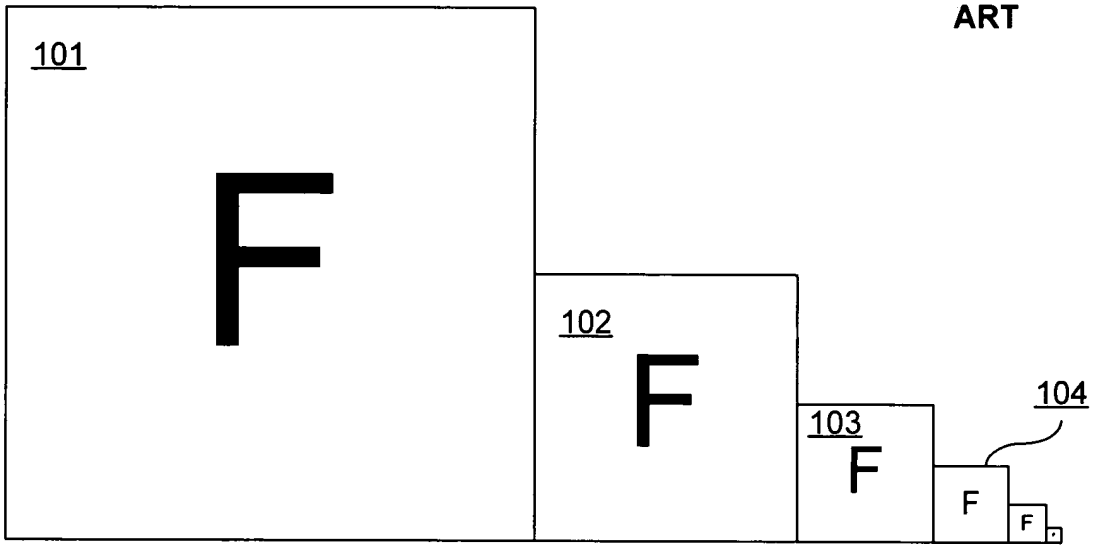

FIG. 1A

PRIOR ART

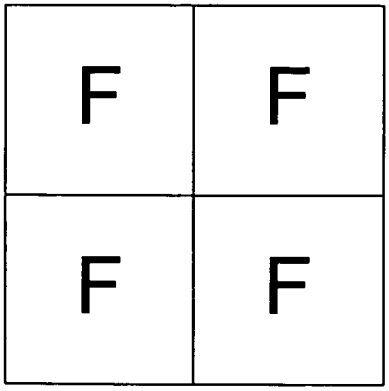

FIG. 1B

PRIOR ART

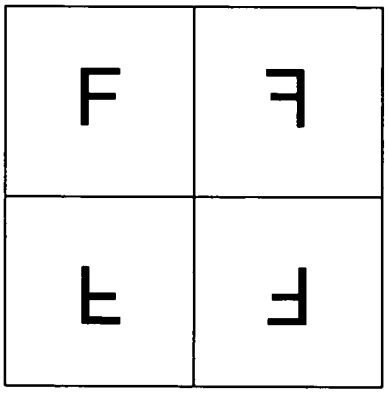

FIG. 1C

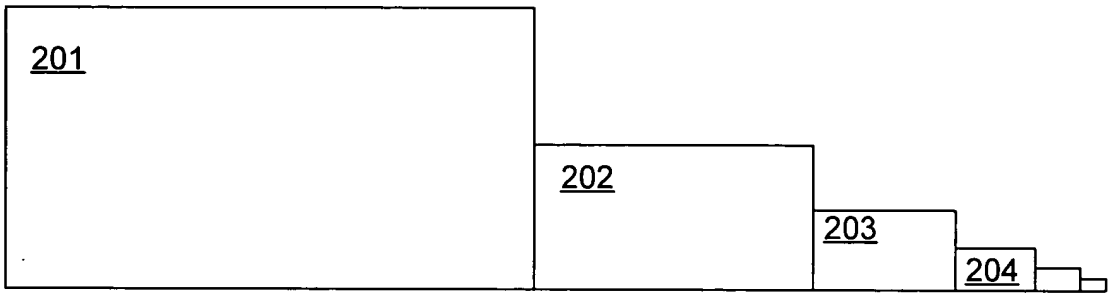

FIG. 2A

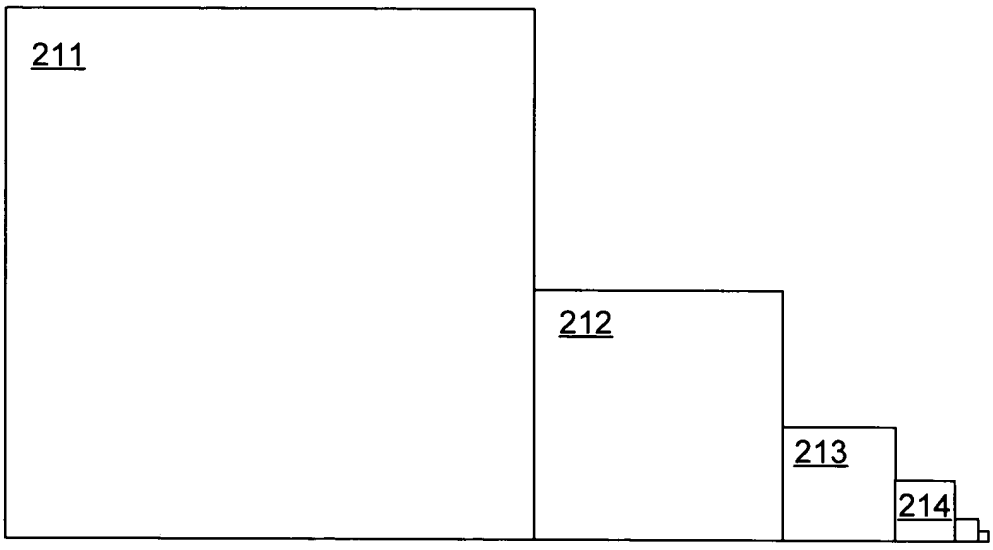

FIG. 2B

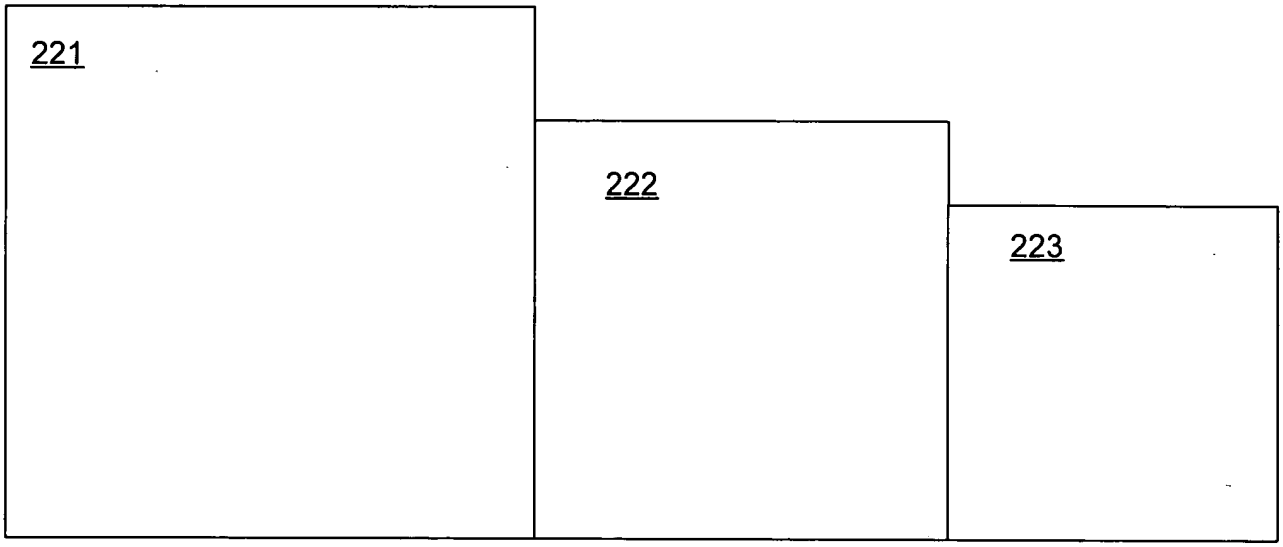

FIG. 2C

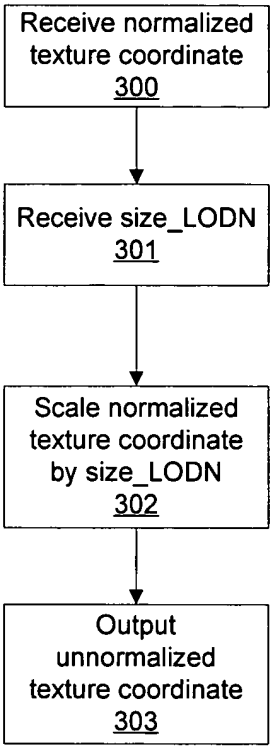
Receive normalized texture coordinate 300
Receive size_LODN 301
Scale normalized texture coordinate by size_LODN 302
Output unnormalized texture coordinate 303

FIG. 3A

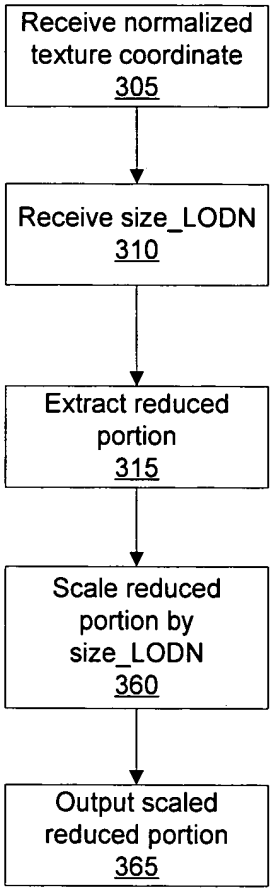
Receive normalized texture coordinate 305
Receive size_LODN 310
Extract reduced portion 315
Scale reduced portion by size_LODN 360
Output scaled reduced portion 365

FIG. 3B

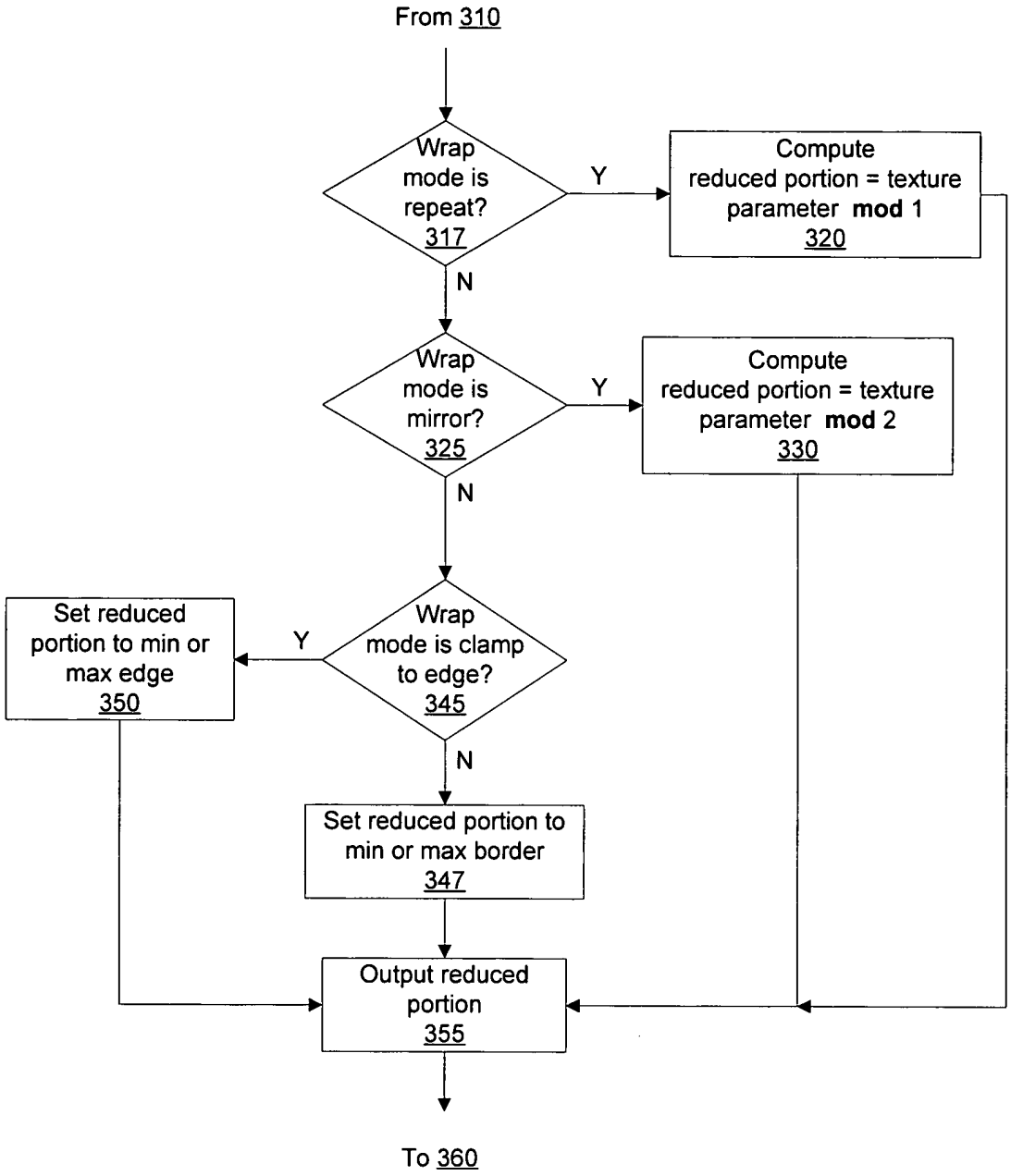
From 310
Wrap mode is repeat? 317
Y
Compute reduced portion = texture parameter mod 1 320
N
Wrap mode is mirror? 325
Y
Compute reduced portion = texture parameter mod 2 330
N
Wrap mode is clamp to edge? 345
Y
Set reduced portion to min or max edge 350
N
Set reduced portion to min or max border 347
Output reduced portion 355
To 360

FIG. 3C

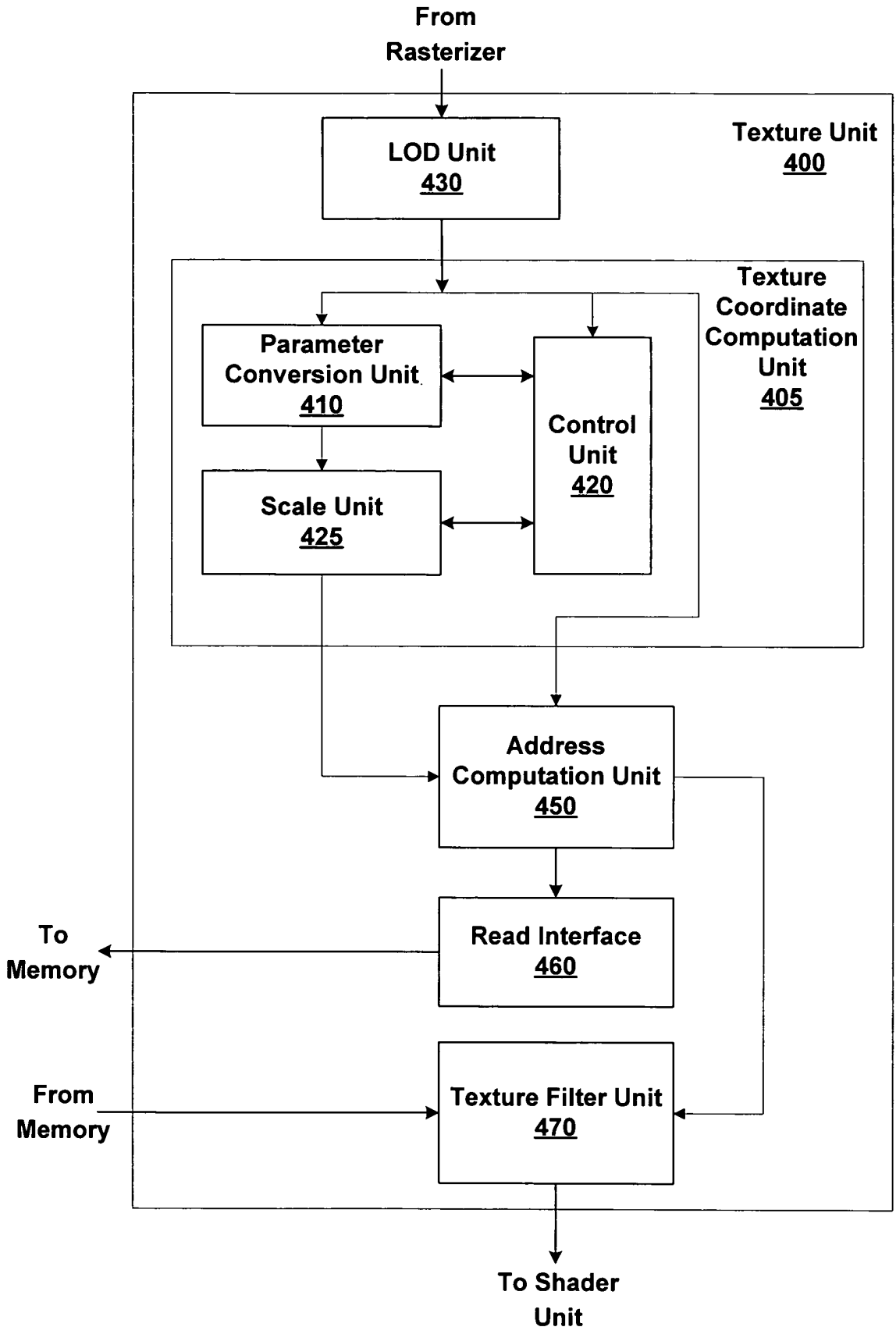
From Rasterizer
Texture Unit 400
LOD Unit 430
Texture Coordinate Computation Unit 405
Parameter Conversion Unit 410
Control Unit 420
Scale Unit 425
Address Computation Unit 450
Read Interface 460
To Memory
From Memory
Texture Filter Unit 470
To Shader Unit

FIG. 4

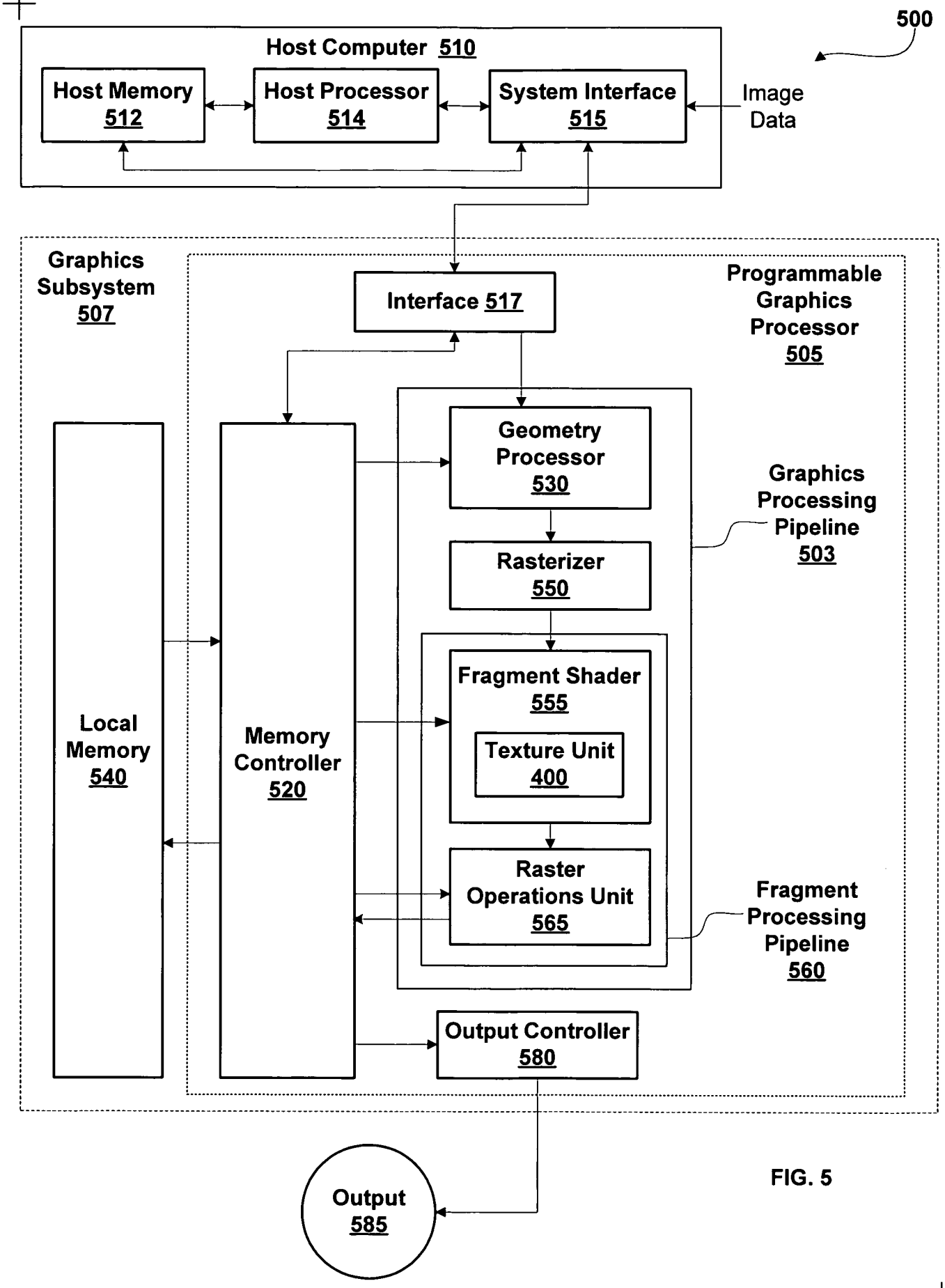
500
Host Computer 510
Host Memory 512
Host Processor 514
System Interface 515
Image Data
Graphics Subsystem 507
Interface 517
Programmable Graphics Processor 505
Geometry Processor 530
Graphics Processing Pipeline 503
Rasterizer 550
Fragment Shader 555
Texture Unit 400
Local Memory 540
Memory Controller 520
Raster Operations Unit 565
Fragment Processing Pipeline 560
Output Controller 580
Output 585

FIG. 5